THE FILING ASSISTANT

Data Base Management System
for the
Commodore 64

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Frazer, Pa.

FILING ASSISTANT
Documentation Revisions

I Main Menu:

1) Option 4 will load the print report function directly without having to first execute the REPORT GENERATOR menu.

2) Option 6 must be selected first in order to set the screen colors, define the printer configuration and set the function keys.

3) Option 7 on the main menu allows you to expand the size of a file that has already been created. When you first set up a file if you specified 100 records would be in the file and the file becomes full you must use this option to allocate more space for the file.

4) Option 8 will automatically format a disk for you. This option can replace the procedure outlined in the front of the manual for formatting a disk.

II Create/Update an existing file:

1) At the command line while updating a file, enter the command 'badd'. This option will allow you to add a group of records to the file much quicker than using the add function. The reason is that the batch add function does not sort the records until you have completed entering the group of records. Each time you complete a record press the RUN/STOP key to store it. After you have stored the last record in the group hold down the SHIFT key and press the RUN/STOP key. This will initiate the sorting of the group of records you just added to the file. Remember to store the last recorded you entered or it will not be sorted.

2) Option 6 'Update a different file' was added to the File Update menu. This option will allow you to change files and or disks to work on a different file without having to return to the main menu first. To select this option you must enter 'menu' on the command line and select option 6 from the File Update menu. If the file is on a different disk change diskettes before you enter the new file name.

III Disk directory and screen dump:

1) At any point in the program you may display the directory of the disk by pressing CTRL and the letter d. Each directory entry will be displayed at the bottom of the screen one at a time. You may slow down the scrolling by holding down the CTRL key. Also when you find the file name you are looking for if you press the RUN/STOP key that filename will remain on the bottom line. When the directory display is completed the cursor will return to the last prompt.

2) At any point in the Filing Assistant you may print an image of the screen to the printer by pressing CTRL and the letter p. An exact image of what is on the screen will be printed on your printer. When the printing is completed the cursor will return to the current prompt. Note: Make sure the printer is on before issuing the print screen command.

IV Report printing:

1) When printing a report you will now be presented with three options: 1) Print a report, 2) Load the Report Generator or 3) Load the Main Menu. This menu will show up before you print the report and at the end of printing the report. This will allow you to print as many reports as you wish without having to go back to the REPORT GENERATOR menu each time.

2) In the report generation section the parameter file and the data file can now be on sepperate disks. The Filing Assistant will ask for the parameter file device number followed by file name. When the program is finished loading the parameter file you may take out the parameter file disk and insert the data disk. Remember that the data disk must stay in the drive until the report is complete.

3) When The Filing Assistant asks the user to select which sort key they wish to use to produce the report it will display the names of the keys.

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THE FILING ASSISTANT

Introduction

THE FILING ASSISTANT is a database package for the Commodore 64. It allows you to store records of information, e.g., customer files, mailing lists, inventory, etc. You create the format by which the information is stored, and may manipulate the information in several ways. You may also print reports based on this information, e.g., customers who live in a particular area, or whose balance due is over $500.; inventory of supplies by part number, etc.

THE FILING ASSISTANT also integrates with THE WRITER'S ASSISTANT word processor to create more personalized form letters.

1.0
What You Need

To use THE FILING ASSISTANT, you need a Commodore 64, a 1541 Disk Drive, a monitor, and a properly interfaced serial or parallel printer. You also need the Disk Reference Manual to the 1541 to interpret any error codes the system may display.

It is necessary to format a 'data disk' on the Commodore 64 in order to store your files. We recommend this practice over storing files on THE FILING ASSISTANT Program Disk, since damage to this disk could result in erasing or damaging the program itself.

To format a data disk, insert a blank disk into the disk drive (after turning on the computer, monitor and drive), and type

OPEN 15,8,15

and press RETURN. The screen will respond 'READY'. Then type

PRINT#15, "N0: DISKNAME,XX"

(where DISKNAME is a name you assign to the disk, and XX is any two-digit number from 00-99) and press RETURN. The red disk drive light will go on, and the disk will spin for a minute. When it has stopped spinning, the disk may be removed, and should be labeled carefully.

THE FILING ASSISTANT assigns the device number '8' to the first disk drive, '9' to the second disk drive, '10' to the third disk drive and '11' to the fourth disk drive. You will need these numbers when the system prompts 'enter device number;' THE FILING ASSISTANT assumes that you are using only one disk drive, thus screen prompts for 'device number' may display an '8' which the user can change if necessary.

2.0

How to Get Started

Turn on the Commodore 64, printer, disk drive and monitor. Place THE FILING ASSISTANT Program Disk in the first disk drive, with the disk label facing up, and type the following:

LOAD "MAIN MENU,"8

and press RETURN.

When the disk stops spinning, the system will display a READY prompt. Type 'RUN' and press RETURN, and the system will respond with the following:

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1) Change/Update an Existing File
2) Create a New File
3) Load the Report Generator
4) Load Label
5) Set function key displays
6) Set printer configuration
7) Set screen colors
8) Stop program

Enter a number and press RETURN.

This is the Main Menu. All functions of the system can be accessed by pressing the appropriate selection number on this menu. The following sections of this manual explain the functions of THE FILING ASSISTANT in the order in which they are most frequently used, especially the first time you use THE FILING ASSISTANT.

At the end of the last line of the Main Menu is the *cursor,* a small flashing square. The cursor appears to the right of the information you enter, and shows you 'where you are' on the screen at all times.

3.0

Set Function Key Displays (Main Menu Selection 5)

There are eight user-defined function keys on the Commodore 64 that can be set to perform repetitive functions. These are the four large keys on the far right side of the keyboard. THE FILING ASSISTANT has defined these keys in this way:

F1 = Add a record
F2 = Copy a record
F3 = Change a record
F4 = Delete a record
F5 = Find a record in a file
F6 = Sort records in a file
F7 = Display the next record in a file
F8 = Display the previous record in a file

The user can change these functions keys to enter any text that must be entered repeatedly. For example, if you are making a file of customers, and most of them are in Philadelphia, function key 'F8' may be re-designated to insert the word 'Philadelphia' every time you press that key.

To change a function key from its pre-programmed function, press '5' on the Main Menu. The system responds with the list of the keys and their current functions and the following prompt:

> Depress function key to be changed or press 'S' to stop changing the keys.

Press the function key that you are changing (to use the even-numbered function keys, press the SHIFT key and that function key); the system responds:

> Enter the characters to be displayed whenever the function key is pressed.

Enter the text you want to display. This text cannot exceed 33 characters. Press RETURN. Now you may choose another function key to change, or press 'S' to return to the Main Menu.

4.0
Set Printer Configuration (Main Menu Selection 6)
Communication between THE FILING ASSISTANT and printer requires that certain information about the printer be entered into the computer. This is called 'configuring' the system, and needs to be done only once. Press '6' on the Main Menu. The system will display the following Configuration Menu:

1) Automatic Printer Set-Up
2) Printer Device Number = 4
3) Secondary Address = 8
(for OPEN statement)
4) Line Feed Required = no
5) ASCII Type Printer = no
6) Save Printer Configuration and Return

Enter Option Number

Press '1' for Automatic Printer Set-Up; the Configuration Menu will be replaced by the following list of printers:

1) VIC 1515/1525
2) Commodore 2022/4022
3) Spinwriter (NOT RS-232)
4) Any RS-232 Interfaced
5) Epson MX Series
6) None of the Above

Choose the number that corresponds to your printer.

For the 1) VIC, 2) Commodore, 3) Spinwriter and 5) Epson MX printers, the printer menu will again be replaced by the Configuration Menu. THE FILING ASSISTANT will automatically supply the configuration information for 2) Printer Device Number and 3) Secondary Address. Next, enter the responses for 4) Line Feed Required and 5) ASCII Type Printer from your printer reference manual. Once these responses have been entered, be sure that THE FILING ASSISTANT Program Disk is in the disk drive and press '6' to save this configuration.

For RS-232 printers (Option 4 on the printer menu), the screen

displays the following:

The OPEN statement for the RS-232 printer will take the form:

OPEN 4,PD,SA,CHR$(x)+CHR$(y)

where PD is the printer device number, SA is the secondary address, and CHR$(x)+CHR$(y) sets the baud and parity of the printer.

The values for this equation are supplied in your printer and/or interface reference manual. Enter these values and press RETURN. The system then returns to the Configuration Menu; notice the values for 2) and 3) have been changed to the values needed for your printer. Then enter the responses for 4) and 5) from the printer reference manual. Once this information has been entered, be sure THE FILING ASSISTANT Program Disk is in the disk drive and press 6) Save Printer Configuration.

If you have a printer other than those listed on the printer menu, press option '6'. The system returns to the Configuration Menu; answer questions 2), 3), 4) and 5) by first pressing each number then entering the appropriate value/answer as contained in your printer reference manual. After you have entered the information, be sure that THE FILING ASSISTANT Program Disk is in the disk drive and press 6) Save Printer Configuration.

This configuration procedure needs to be done only once. It has now been saved on THE FILING ASSISTANT Program Disk and does not have to be done again, unless you change printers.

5.0
Set Screen Colors (Main Menu Selection 7)
To set the background, foreground and border colors, press '7' on the Main Menu. The screen displays the following:

Change Screen Colors
1) Change Background
2) Change Foreground
3) Change Border
4) Save Current Colors

Enter Number and Press RETURN

Press the number that corresponds to the screen color you want to change and RETURN. The prompt at the bottom of the screen reads:

Press function key f1 until your favorite color appears (f3 goes in reverse). Press 's' when you are finished.

When you have completed the changes, make sure the Program Disk is in the disk drive and press '4' to save the screen colors you have chosen. From now on, whenever you use THE FILING ASSISTANT, these colors will appear on the screen.

6.0
Create a New File (Main Menu Selection 2)
This procedure will enable you to create a file into which you can enter information.

There are several terms you will need to be familiar with in order to work with THE FILING ASSISTANT. These terms are defined in the glossary in the back of the manual, but a preliminary definition is given here.

field - the space and category of a piece of information, e.g. Name, Address, Balance and Title are all **field names.** The space into which corresponding information is entered is the **field.**

record - the total fields belonging to one entry. For example, in a mailing list, each **record** consists of the Name, Address, City, State and Zip Code fields.

file - the total of all records belonging to one category. For example, a mailing list **file** may consist of 250 records.

A simple rule of thumb is this: **files** are made up of **records, records** are made up of **fields.**

To create a new file, press '2' on the Main Menu and RETURN. The screen then displays the following instructions:

> Design your data entry screen using brackets (i.e., [ ]) where fields are to be placed. You may use any characters except the colon, the double quote (shifted 2), and the comma.
>
> Use insert, delete and the cursor control keys to manipulate the cursor on the screen.
>
> Use the COMMODORE key to place graphic characters on the screen.
>
> PRESS THE RUN/STOP KEY WHEN YOUR SCREEN IS FINALLY COMPLETED.
>
> Press RETURN to continue.

When you press RETURN, a message will appear at the bottom of the screen with instructions on entering a file name. Enter a name (12 characters maximum) by which this file will be identified, and press RETURN. **Note:** This can not be the same name you gave the data disk in Section 1.0.

When you press RETURN, the screen will go blank, and the cursor will appear at the top left-hand corner of the screen. Now you can design your own file screen. Type a label for each field, e.g., Name, Address, etc., then designate the area for that field using the left and right **bracket** keys (these are the SHIFT position of the colon and semicolon keys), **not** the parentheses. Use the RETURN, Insert, Delete and cursor control keys to move the cursor around the screen. You may place fields anywhere on the screen. A finished screen might look like this:

```
Name [                          ] Age [      ]
Address [                                    ]
City [                          ] State [    ]
Zip [          ]
Telephone [                     ]
Customer No. [              ]
```

Each record can contain up to 25 fields. The total amount of data that can be stored in a record is 254 characters. This is the total number of **spaces** between brackets on the screen plus the total number of brackets; field names are not counted. Keep a count of the total number of spaces you have used; you will need this figure later.

Press the RUN/STOP key when you are satisfied with your screen design.

The message 'Deciphering Fields' appears at the bottom of the screen. When this is finished, the system numbers the fields, and highlights the space between each field's brackets. If the screen is correct, press 'y' at the prompt; if you wish to change any part of the screen, press 'n' and the cursor will return to the screen area so that changes/corrections can be made.

When you press 'y,' the first field space will be highlighted, and the screen prompt asks you to type a short label (up to 8 characters) for this field. This label will be used by THE FILING ASSISTANT when selecting fields for the various sort functions later on. For example, if you used 'Name of Customer' as a field name, you may enter 'Name' or 'Customer' as a label.

Then the system asks you to type a line of text to describe this field (up to 30 characters). When you are entering data into this file, this description will appear at the bottom of the screen as instructions or prompt as to what should go into that field. For example, the description for the 'Name' field could read 'Customer name, last name first'. This description will be valuable to the person entering data, explaining what information should go into each field.

The next prompt asks if the field will always be a number. Enter 'y' or 'n' accordingly. If you have indicated that the field will always be a number, and you later enter any non-numeric character, the screen will display an error message and disallow the character. Numeric fields are those on which you will want to perform

mathematical functions, e.g. 'balance due' or 'total'. So a telephone number field, for example, is not considered a numeric field.

This procedure is repeated for each field on the screen. When all the fields have been defined, the system will ask if you want to make any corrections. 'Y' will move the cursor back to the beginning of the file screen, so that you can make any corrections/changes, and repeat the procedure above. 'N' will store this screen design.

Next determine the maximum number of records the file will contain. The following calculations will determine this number:

No. of records X no. of sort keys X 2;
Subtract this number from 170,000;
Divide the answer by the total number of characters that can be contained in the record (spaces between brackets).

For example, if you had a mailing list file that could contain a total of 127 characters (between the brackets), you specified the 'Name,' 'State' and 'Zip code' fields as sort keys, and you wanted a maximum of 1000 records in your file, the formula would read as follows:

(170,000 - (1000 X 3 X 2))/127

If the answer to this equation is equal to or greater than the maximum number of records you want, you will be able to fit the mailing list file on one disk. In this case, the above formula equals 1291.3, so the user could fit 1000 records on his disk.

Enter the maximum number of records and press RETURN. The system then asks how many fields you want to sort by, maximum 10 fields.

The system then displays the labels of all the fields in the record. Enter the field that the system should sort by first. For example, in a file of customers you might want to sort by the customer's last name, so enter the corresponding field name. The next prompt reads 'If there is a tie between fields, what should I use to break the tie?'

Example 1: If there are three Smiths in the customer file, choose another field to determine which Smith is listed first. In this case, you may choose 'First name' or 'City'. This second field is called a **subsort.**

Example 2: If you have a file of sales by customer number, you may use invoice number as a subsort, to break a sort 'tie' between customer numbers; thus the sorted file might look like this:

Customer	Inv.#	Amount
1001	001	$ 15.00
1001	002	$300.00
1002	125	$129.00
1002	131	$ 52.50
1003	150	$100.00

This sort definition continues for as many fields as you want to sort by. When you have finished, the system asks if you want to make any corrections. Answer 'y' or 'n' accordingly.

Place your data disk in the disk drive. Then enter the device number of the disk drive containing the data disk and press RETURN. The file structure will be stored on the data disk, and the screen will return to the Main Menu.

Your file is now ready to receive information.

7.0
Change/Update an Existing File (Main Menu Selection 1)
Once you have created the data base (file) in section 6.0, you may now enter information into the file. 'Change/Update' here refers to the records in the file, not the screen design (To change a screen design, see Section 9.3). Using this selection, you can perform a number of functions in addition to adding records to the file.

To change/update a file, press '1' on the Main Menu. The screen will prompt for the filename. If a new file has just been created, this prompt will also display this new filename. Following the prompt, enter the name of the file, place the data disk in the disk drive, and press RETURN. To exit this function before entering the filename, type 'quit' and press RETURN.

When you press RETURN, THE FILING ASSISTANT will retrieve the record screen as it was designed. At the bottom of the screen is a data line which displays the primary sort and subsort keys currently being used for that file. The cursor appears after the 'Command Line:' prompt. The data line also displays a 'Record #' prompt, indicating the current record's position in the file.

Note: The Change/Update selection allows you to manipulate your file records in several ways. This includes adding, deleting, finding and sorting records. A full list and brief explanation of each task can be seen by typing 'help' and pressing RETURN whenever the cursor appears at the 'Command Line'.

Add (ad): Will allow you to add a record to your file. *
Copy (co): Add a record by copying the record currently displayed. *
Change (ch): Lets you change the record being displayed. *
Delete (del): Removes the record being displayed from your file. *
Sort (so): Select field for access to records in sorted order. *
Find (fi): Find a record using the current key field. *
Next (n): Display the next record in sorted order. *
Previous (p): Display the previous record in sorted order. *
Locate (lo): Recall a record by its location in sorted sequence.

Forward (fo): Step forward through file until space bar is pressed.
Reverse (rev): Step backward through file until space bar is pressed.
Set (se): Choose fields for display on fwd/reverse options.
Default (def): Define text to be displayed when function key is pressed.
Menu (m): Choose another program or stop run.
Help (h): For Assistance.

* This command can also be accessed through the function keys (section 3.0).

You may use the indicated abbreviated form of these options instead of entering the full word.

To perform any of these options, use the appropriate function key (see Section 3 on defining function keys), type the command, or type the abbreviated version of that command, and press RETURN.

To move from field to field within a record, press RETURN or use the cursor control keys.

7.1
Add a Record ('ad' or function key f1)
To add a record to your file, type ADd or press 'f1'. The screen will display the record screen as it was originally designed; the cursor appears in the beginning of the first field, with the appropriate description comment displayed at the bottom of the screen. Enter the information as required and press RETURN to move the cursor to the beginning of the next field. You may move back to correct or change fields by using the cursor keys. When the information is correct, press the RUN/STOP key; the record will be stored on the disk **in sorted order.**

For example, if you have entered records for customers #1001 and #1004 in a file which is sorted by customer number, and you add a record for customer #1002, this record will become Record #2 in the file. The screen will not be cleared until another option is chosen.

Note: THE FILING ASSISTANT stores pertinent information about each record added to a file. An accidental power failure could erase this information, damaging or even erasing records. To eliminate this possibility (especially when adding a large number of records), perform the following 2 steps at least every 10 new records:

1) type 'menu' at the Command Line on the Update screen & press RETURN.
2) when the 'Another Program' menu appears, choose Option 5, 'continue update of file'; this will return you to the file screen again.

This procedure should be done when entering a large number of new records, or if you will not be performing any other functions after adding records.

7.2
Copy a Record ('co' or function key f2)
Many of your records may contain similar information, e.g. City, Zip Code or Account Status. Copying a record then changing only the fields that are different can save a great deal of time. Type COpy or function key f2 to copy the record currently on the screen. (If you wish to copy a different record, first bring the record to the screen by using the 'Find,' 'Next,' 'Previous' or 'Locate' options.) This will create a duplicate of the record, and the cursor will be at the beginning of the first field to allow you to make any changes.

7.3
Change the Current Record ('ch' or function key f3)
To make a change in the record currently displayed, type CHange or function key f3. This will enable you to make the necessary changes in any field of the record. (If you wish to change a record other than the one displayed, first bring the record to the screen by using the 'Find,' 'Next,' 'Previous' or 'Locate' options.)

7.4
Delete the Current Record ('del' or function key f4)
To delete the record currently displayed, type DELete or press function key f5. The prompt at the bottom of the screen will ask

for confirmation that this is the record to be deleted (a protective device to prevent you from deleting the wrong record). Press 'y' to delete the record; type 'n' to cancel the option and keep the record. (If you wish to delete a record other than the one displayed, first bring the record to the screen by using the 'Find,' 'Next,' 'Previous' or 'Locate' options.)

7.5
Sort Records ('so' or function key f5)
Records are added to the file in sorted order, using the first, or primary, sort key field designated when the file was created. When searching for records using the 'Find' option, the system will also use this 'primary sort key'. If, however, you need to search for a record on a different field, you need to change the primary sort key designation (e.g., looking for a particular customer, but you can only remember his city, not his name). Type SOrt or press function key f5. The screen will display the current sort key and its subsort, then list the other sort keys (and their subsorts) you may sort by, with the prompt "Choose the field with which you will gain access to your file in alphabetical or numeric order". Press the **number** of the appropriate field you wish to sort by and press RETURN.

7.6
Find ('fi' or function key f6)
To find a record that contains a particular name or value, type FInd or press function key f6. THE FILING ASSISTANT will use your primary sort key, and ask for a specific **value** for that sort key. Type the value (name, address, number, etc.) exactly as it was originally entered. **For example,** if you are sorting by city, the system will ask you for the name of a specific city. When you press RETURN, the system will retrieve the **first** record it finds with that value. If this is not the desired record, use the 'Next' option (Section 7.7) to see subsequent records with the same value.

7.7
Next Record ('n' or function key f8)
To display the next record in a file in sorted order, type Next or press function key f8. This option can be used in conjunction with the 'Find' and 'Locate' options. For example, if you know someone in your mailing list lives in Zip Code 19355, you can FInd the first incidence of '19355,' then move through the file in that area.

7.8
Previous Record ('p' or function key f7)
To display the previous record in a file in sorted order, type Previous or press function key f7. This option can be used in conjunction with the 'Find' and 'Locate' options (see example in section 7.7 above).

7.9
Locate a Record ('lo')
To locate a specific record **position** within a file, type LOcate. The system will prompt you for the record number or position. This is helpful in a large file when you need to find a record in the middle or the end of the file, and know its exact or approximate position. Type in the record number; the corresponding record will be displayed. If you enter a record number that does not exist, the screen will prompt 'Out of Range' and allow you to enter another number. If the desired record is not displayed, you may use the 'Next' and 'Previous' options to find the exact record you want.

7.10
Forward ('fo')
This option will 'step through' a file from the current record forward, displaying on the screen the fields chosen in the 'Set' option, Section 7.12. Type FOrward, and the records will be displayed as a list, with designated values listed across the screen. To stop the list at any time, press the RUN/STOP key. To display the record the listing stopped at, press 's' and RETURN. To continue the listing, press 'c' and RETURN.

7.11
Reverse ('rev')
This option will 'step through' a file from the current record backward, displaying on the screen the fields chosen in the 'Set' option, Section 7.12. Type REVerse, and the records will be displayed as a list, with designated values listed across the screen. To stop the list at any time, press the RUN/STOP key. To display the record the listing stopped at, press 's' and RETURN. To continue the listing, press 'c' and RETURN.

7.12
Set (se)
This option is used in conjunction with the 'Forward' and 'Reverse' options, Sections 7.10 and 7.11. To specify the fields you will see when using these options, type SEt. The top of the screen will read 'Set Fields for Reverse/Forward Display'. The prompt at the bottom of the screen will read 'Enter field label to display or enter nothing to quit'. Type in the 8-character label corresponding to the field(s) you wish to use. Press RETURN after each label. When you have entered all the labels, press RETURN again to return to the record screen. Now you may use the 'Forward' and 'Reverse' options.

7.13
Default ('def')
This option performs the same function as Main Menu Selection 5, Set Function Key Displays, allowing you to set the function keys to display a frequently-used word, phrase, etc. Type DEFault and press RETURN. The system responds with a list of the function keys and their current functions and the following prompt:

> 'Depress function key to be changed or press 's' to stop changing keys'.

Press the function key you are changing, and the system responds with:

> 'Enter the characters to be displayed whenever this key is pressed'.

Enter the text you wish to associate with that function key, 33-character maximum, and press RETURN. You may then choose another function key, or press 's' to return to the record screen.

7.14
Menu ('m')
Typing Menu will first take the system to the Report Generator Menu, (Section 8.0); to return from there to the Main Menu, press Option 4, 'Return to Main Menu.'

7.15
Help ('h')
To obtain a brief set of instructions for these options, type Help. The screen will display the options three at a time, with a prompt at the bottom of the screen to continue the listing or return to the record screen.

8.0
Load the Report Generator (Main Menu Selection 3)
The report generator allows you to create a format for printing reports.

To format a report for the information in a given file, press '3' on the Main Menu. The system displays the following:

Choose one of the following options

1. Create a report format
2. Change a report format
3. Delete a report format
4. View the general instructions for the REPORT GENERATOR program
5. Generate a report
6. Return to the Main Menu ("STARTUP" program)

8.1
Creating a Report Format
To produce a report from a file stored in THE FILING ASSISTANT, you must first give the system formatting instructions so it can print the report in the way you want, e.g., page width, length, spacing, number of columns, etc. To do this, THE FILING ASSISTANT asks you a series of questions regarding the report. Each question is assigned a SCREEN #; questions, comments, information, etc., are displayed at the top of the screen. At the bottom of the screen, below the screen number, are two lines:

options: format/description of your answer to that question. For example, the question 'What is the DEVICE NUMBER of the Program Disk' would have the option '8-12'; 'What is the name of the DATA FILE this report is for?' would have the option '13 characters,' meaning you may enter a 13-character file name.

prev in: means 'previous answer in.' The first time you format a report for a file, this field will be blank. When you come back to this format, however, it will contain the answer you gave to that question before.

You can move from question to question by using the arrow keys (these are **not** the cursor control keys, but the arrow character

keys, on the left and right sides of the keyboard); the left-facing arrow will back up to the previous question, the up-facing arrow will move forward to the next question. After answering a question, press RETURN to enter that answer and move on to the next question.

Press '1' on the Report Generator menu; the system instructs you to insert the data disk containing the files you are using for the report. Then enter the device number of the drive in which you inserted this disk.

At the prompt, enter the name of the file for which you are creating the report. Then the system instructs you to insert the disk on which the format information will be stored and enter its device number. You can store the format on the same disk as the original file.

Then enter title for the format, maximum 13 characters. When you enter the title and press RETURN, the system will display the name and ask if it is OK. Press 'y' to confirm this title; press 'n' to make a correction.

Note: The remaining format questions refer to the physical appearance of the printed report. Not all of the questions noted here will apply to your report, depending on the answers you give. **For example,** if you choose not to number the report pages, THE FILING ASSISTANT will bypass the question about where you want page numbers to appear. Likewise, if you answer '0' on the number of header or footer lines on the report, THE FILING ASSISTANT will bypass the screen where you would enter this text.

The first screen question asks for the PAGE WIDTH of the report. The options are 1-160 columns; however, you are limited by the type of printer that you have. For example, if you have an 80-column printer, the widest your page can be is 80 columns.

The next question asks for the PAGE LENGTH, in lines. Depending on the length of your paper, choose from 1-150 lines. For standard 11-inch paper, the page length is 66 lines.

Then enter the number of blank lines you want in the TOP MARGIN, 0-65, and the BOTTOM MARGIN, 0-63.

The next questions deal with page numbers. The first question asks if you want PAGE NUMBERS; press 'y' or 'n' accordingly. If you responded 'n,' the system moves to the questions on header and footer lines. If you responded 'y,' you have the option of where on the page the number will appear:

1. Top left-hand corner
2. Top right-hand corner
3. Bottom left-hand corner
4. Bottom right-hand corner

Then indicate if the word 'Page' is to appear with the number by answering 'y' or 'n' to the prompt.

You then have a choice of using header or footer lines. These are lines of text (or numbers) which will appear across the top or bottom of each page, e.g. '1982 Annual Report, Compiled 3/31/83.' The 'option': prompt will display the number of lines you may use (remember, you can change the header and footer numbers by using the left-arrow to return to the appropriate question).

Next specify what number page numbering should start at; options are any number greater than or equal to zero (0).

Next specify the number of header lines, maximum 3 lines; the page number will appear on one of these lines.

After you choose the number of header lines, the system will ask for the text that should appear on the first line specified, maximum 80 characters on each line. The system displays a screen to input the first 40 characters, and another screen to input the second 40 characters. After you have entered the complete text for each header line, the system displays your input and asks if it is OK; answer 'y' or 'n' accordingly; 'n' will allow you to make corrections/changes.

If you have specified multiple header lines, this procedure will be repeated for each line.

The entire procedure is then repeated for footer lines, which might contain the name of the person who prepared the report, the organization address, etc. You may have a maximum of 3 footer lines. Remember when entering footer line text that you may have specified that page numbers appear on one of the lines, so you must allow space for that text.

The next question asks for single or double spacing. Enter '1' for single spacing; enter '2' for double spacing.

The system then instructs you to enter THE FILING ASSISTANT Program Disk in the disk drive; press RETURN, then enter the device number of the drive.

When the disk stops spinning and the drive light goes out, the system asks for the number of columns in the report. The options depend upon the PAGE WIDTH entered previously.

The next question refers to a record count. A record count keeps track of the number of records the system has accessed for the report. Enter 'y' if you want a record count or 'n' if you do not want a record count to appear. A record count can appear in Column 1 only.

Now the system will ask specific questions concerning the contents of each of the columns indicated. For example, if you indicated that you want five columns, the system will ask for all of the column specifications for Column 1, then Column 2, etc., and end with Column 5; if you indicated that you want 10 columns, the system will ask for all of the column specifications for Column 1, then Column 2, etc., and end with Column 10.

1. Starting position of the column - The options for this question depend on the stopping point of the previous column and the chosen report width. The system assumes at least two spaces between each column. **For example,** on a page width of 80 characters in a five-column report, if Column 1 starts in Position 1, and ends in Position 15,

Column 2 may start no sooner than Position 17. The system will not allow you to overlap columns.

2. Width in characters of the column - Take into consideration the largest number of characters that will be printed in the column. **For example,** in a numeric column which will print a total at the bottom, the numbers in the column may be only four digits, but their total may require five or six digits. If you do not specify sufficient column width, the system will truncate the number, i.e., cut it short.

3. Title lines - You are allowed two lines of title for the column. Each title line can be no longer than the width of the column, e.g., a column which begins in Position 1 and ends in Position 15 will allow a title line of 14 characters. At the prompt, enter Title Line 1, press RETURN and enter Title Line 2 (or press RETURN twice to leave these lines blank). The system will then display these two lines for confirmation; enter 'y' if the text is correct, 'n' to make corrections.

4. Column information - The system will display the labels of all the fields in the record for which the report is being designed. You have the following options for the contents of the column:

a. A field exactly as it appears in each record (as in Name, Customer Number, etc.)

b. A field with a mathematical operation upon another field, e.g. Field 1 multiplied by Field 3.

c. A field with a mathematical operation upon a value in a previous column of the report. **For example,** if Column 1 is 'Previous Charges,' and Field 3 of the record is 'New Charges,' you could add Field 3 and Column 1 to obtain a complete history of all charges.

d. A field with a mathematical operation upon a specific value. **For example,** to find the tax on the items in Field 4, you would multiply Field 4 by .06.

e. A previous column with a mathematical operation upon another column; **for example,** the values in Column 1 added to the values in Column 2.

f. A previous column with a mathematical operation

upon a specific value.

Mathematical formulas, fields or columns are designated as follows: enter the field number (Fn) or column number (Cn), the appropriate sign of the mathematical operation (+, -, *, /,), then the field number (Fn), column number (Cn) or value (Vn). You must designate the field, column or value with 'F,' 'C,' or 'V,' followed by the field number, column number or value. **For example,** the options listed above would appear as follows:

a. F1
b. F1*F3
c. F3+C1
d. F4*V.06
e. C1+C2
f. C1*2

5. Decimal place - If the contents of the column are numeric, the system will ask for the number of place to the right of the decimal point; options are 0-5. Columns with dollar amounts should always contain two places after the decimal point.

Note: If a column is designated at 2 decimal places and a formula results in more than 2 decimal places, the number will be rounded up, then print only 2 decimal places, **for example,** '4.049' would become '4.05.'

6. Column justification - Specify if you want the column to be left- or right-justified. Left-justification will line up the column in its first position; right-justification will line up the column in its last position. Enter '1' for left-justified or '2' for right-justified.

7. Totals or Subtotals - If the contents of the column are numeric, you must specify if you want totals or subtotals for the column. Enter '1' for no totals or subtotals, '2' for both totals and subtotals; '3' for totals only (no subtotals).

If you choose option '2,' the system will then offer two additional options:

1) Subtotal when the primary sort key changes;
2) Subtotal only when both primary and secondary sort keys change.
For example, if the primary sort key is 'Customer Number' and the secondary sort key is 'Invoice Number,' you can choose to have a subtotal displayed for each Customer Number ('1'), or for each Invoice Number within the Customer Number and also for each Customer Number ('2').

Questions 1 through 7 will be repeated for as many columns as you have specified.

Next you must indicate your selection criteria. If you choose to print all records in a file, press '1.' If you want to print only certain records, enter '2.'

If you are selecting certain records, the system will list the fields in the record. Then indicate your selection criteria by entering the field number (Fn) or Column number (Cn) and the criteria. Criteria symbols are as follows:

=	equal to
<>	not equal to
<	less than
>	greater than
<=	less than or equal to
>=	greater than or equal to

The last part of the equation can be a field number, column number or a value (Vn).

Example 1: If Field #1 is a 'Name' field and you want to print only the names up to 'Smith,' the equation would read 'F1<= Smith.'

Example 2: If Column 3 on the report is produced by subtracting 'Amount Paid' from 'Amount Due', you could print the report for all accounts with a balance, using the equation 'C3>V0.'

You can specify up to 10 selection criteria; however, keep in mind that a record must meet **all** of the selection criteria to be printed.

When all the selection criteria have been entered, the system instructs you to insert the Data Disk in the drive, press RETURN and enter the device number of the drive. Then at the prompt, insert the Program Disk; enter the device number and press RETURN. There will be a pause while the system loads the information you have entered, then it will return to the Report Generator menu.

Note: If you specify less than 10 selection criteria, press the up-arrow key and RETURN after you have entered the last selection.

8.2
Changing a Report Format
To make a change to a previously created report format, press '2' on the Report Generator menu.

The system instructs you to load the data diskette containing the report format you want to change; then enter the device number of the drive, and press RETURN.

Enter the filename of the DATA FILE that the report is to be run against and press RETURN. The system will then retrieve that file.

Enter the title of the format and press RETURN. The system will display the title and retrieve the format from the disk, then ask if you want to change all format items ('1') or selection criteria only ('2'). Enter the appropriate choice and press RETURN. If you choose option '1,' then make the changes following the same instructions as apply to creating a format. Use the arrow keys to 'page through' the format to the questions you need to change; the 'prev in': field will contain the answer you originally entered. When you make a change in the format, press RETURN for that question, or else the change will not be recorded.

If you choose option '2' the system will display your previous selection criteria. Follow the same instructions as apply to selection criteria in the Creating a Format section. When you make a change in criteria, press RETURN for that selection, or else the change will not be recorded.

At the end of the changes, the system will return to the Report Generator Menu.

8.3
Deleting a Report Format
To delete a report format, press '3' on the Report Generator menu.

The system instructs you to load the data disk containing the report format you want to delete; then enter the device number of the drive and press RETURN.

Enter the title of the desired format and press RETURN. The system will display this title and ask you to confirm; enter 'y' to confirm, 'n' to enter a different title.

The system will locate and delete the indicated report format, then return to the Report Generator menu.

8.4
Printing a Report
To print a report in the format you have created, press '5' on the Report Generator Menu. A system prompt asks if the report is to be displayed on the screen or printer. Enter 's' for screen or 'p' for printer. If you have a printer, the system instructs you to set the printer, with the top of the report form (printout paper, letterhead, etc.) in the printer; then press any key to continue.

Enter the device number of the disk and press RETURN. Enter the name of the **file** that you are retrieving information from or type 'quit' if you have decided not to print the report. 'Quit' will return to the Report Generator Menu.

The system then displays the number of sort keys and the **number** of the sort key that you want to use for your search. This is the number assigned to the fields by the system when you designed the record screen for the file (Section 6.0). Sort keys will not be displayed at this point, so you should keep a written record of the sort keys for each file.

The system then asks for the device number of the parameter (format) filename and then the parameter filename. This is the title you gave the report format when it was created.

When you press RETURN, the report format will be retrieved, and the report printed. To stop printing at any time, press RUN/STOP. You can then press 's' to stop printing entirely and return to the Report Generator Menu, 'c' to continue printing from that point, 'r' to restart printing the report from the beginning, or 'q' to return to the Report Generator Menu.

When the report is completely printed, the system will return to the Report Generator Menu.

9.0
Load Label/Print Dump
This selection has three main functions:

1) Printing mailing labels (Section 9.1);

2) Transfer file records into THE WRITER'S ASSISTANT for use in the 'Merge' function for form letters/documents (Section 9.2);

3) Transfer file records into a sequential file, either for transfer to another program, or when redesigning a form (Section 9.3).

Press '4' on the Main Menu; the system will ask if you have a printer; enter 'y' or 'n'.

After a pause while this option is loaded, enter a file name and press RETURN; insert the data disk in the drive, enter the drive number, and press RETURN.

9.1
Mailing Labels
Formatting mailing labels follows the same procedure as noted in the Report Generator format, Section 8.1. Questions, comments, etc., are displayed at the top of the screen, options and 'prev in': at the bottom. As before, the answer to each question will determine subsequent questions, e.g., if you specify two labels across the page, the system will ask for the starting positions for only two columns. Use the arrow-keys (character keys, **not** the cursor control keys) to move backward and forward between questions, press RETURN after answering each question to move on.

The system then asks how many labels are across the page; options are 1-4. Then enter the number of lines on each label, from 1-6 lines. Remember to take into account the size of the label itself, not just the number of printed lines for each label; **for example,** an address may consist of only four lines, but the label size may require six lines, to allow for the space between labels.

The next question asks for the starting number of each label across the page. This number depends on the number of labels

across, and the size of each label; a forms ruler may be required to determine this number.

Next specify what will appear on each line of the label. You can have up to 25 entries/line, depending, of course on the width of each entry, and the column width of each label. These entries may reference a field number from the file you are retrieving, or a comment, such as 'PLEASE FORWARD,' or 'IMPORTANT INFORMATION ENCLOSED.' Press RETURN after each entry, and the system will prompt you for the next entry. Entries must contain a field number (this is the number assigned to the field when the record screen was first created), a comment, or the '+' to move to the next line of the label. The system will continue prompting until all indicated lines of the label are accounted for. **For example,** a mailing label for a file which is designed as follows:

Last Name [Smith] First [John]
Address [123 Main Ave.]
City [Akron] State [OH] Zip [45678]

would be formatted as follows for a six-line label:

1) '2' (for Field 2, 'First')
2) '1' (for Field 1, 'Last Name')
3) '+' (to move to the next line)
4) '3' (for Field 3, 'Address')
5) '+' (to move to the next line)
6) '4' (for Field 4, 'City')
7) '5' (for Field 5, 'State')
8) '6' (for Field 6, 'Zip')
9) '+' (to move to the next line)
10) '+' (to move to the next line)
11) 'DATED MATERIAL ENCLOSED' (place this comment at the bottom of the label)
12) '+' (to move to the next line)
13) '+' (to move to the next line)

The last two '+' here will account for a six-line label, leaving two blank lines between this and the next label.

When all the label lines have been accounted for, the system displays the sort keys for the file; indicate the number of the key you wish to sort on for these labels.

Next indicate selection criteria. Enter '1' if all records are to be selected, '2' to print only certain records.

If you are printing only certain records, the system will list the fields in the record. Then indicate your selection criteria by entering the field number (Fn) and the criteria. Criteria symbols are as follows:

= equal to
< > not equal to
< less than
> greater than
<= less than or equal to
>= greater than or equal to

For example, if Field #1 on your record is 'Name,' and you want to print only the names in the file up to 'Smith' you would enter 'F1 <= Smith.' Or if Field #3 is 'Total Income' and you want to print labels for those people whose income is greater than $30,000, you would enter 'F3>V30000.'

You can specify up to 10 selection criteria; however, keep in mind that each record you wish to print must meet **all** of the selection criteria.

You next have the option of printing the labels to
1. Printer
2. Screen
3. Print to disk in Writer's Assistant format
4. Print to disk in sequential file format

'1' - The system will instruct you to place the disk with the specified file in the drive, turn the printer on, and press RETURN to begin printing.
'2' - The system will instruct you to place the disk with the specified file in the drive and press RETURN to start printing.
'3' or '4' - The system will ask for the output filename. This is the name that THE WRITER'S ASSISTANT or any other program will use to access the file.

Note: If you are printing to THE WRITER'S ASSISTANT, this file will

become the variables file in the 'Merge' function of THE WRITER'S ASSISTANT (See the Interface section).

Then enter the device number for the output file. The system will instruct you to put the specified file disk in the drive and press RETURN to start printing.

To stop printing at any time (either to the printer or the screen), press RUN/STOP. You can then press 's' to stop printing entirely, 'c' to continue printing from the point at which you stopped, or 'r' to restart printing from the beginning.

9.2

Merging Files With THE WRITER'S ASSISTANT

To merge information from THE FILING ASSISTANT with a form letter/document in THE WRITER'S ASSISTANT:

1) Select Option 4 'Load Label' from the Main Menu of THE FILING ASSISTANT.

2) Answer questions 1-3 as you would normally.

3) Answer '1' for 'Number of labels across.'

4) Answer '1' for 'Number of lines to be printed.'

5) Specify those field numbers that you wish to merge with your form letter all on one line. **For example,** if your file is made up of the following fields:

1) Name
2) Address
3) City
4) State
5) Zip
6) Telephone

and you wanted to merge only fields 1-5 with a letter created in THE WRITER'S ASSISTANT, the Line 1 prompt would read like this:

LINE 1
1 2 3 4 5

You may not specify comments to be merged with THE WRITER'S ASSISTANT letter; any comments entered will be ignored when the file and form letter are merged.

Note: Make sure that the spelling of the field names from THE FILING ASSISTANT correspond to those used in the COMMODORE-X command in THE WRITER'S ASSISTANT when creating the form letter.

6) You may select any sort key and/or selection criteria.

7) Select Option 3) 'Print to disk in WRITER'S ASSISTANT format.'

8) The system will ask for a file name and device number in which information from THE FILING ASSISTANT is to be stored. Use this same file name when prompted for the Variable-Fields file in the 'Merge' function of THE WRITER'S ASSISTANT.

9) Press RETURN when the correct disk(s) are in place.

10) The red disk drive light will stay on until the information is transferred.

This process may be performed with a single disk drive. However, both THE FILING ASSISTANT data file and the resulting WRITER'S ASSISTANT Variable-Fields file will end up on the same disk. Be certain there is enough room on the disk for both files before beginning this procedure.

9.3
Redesigning a Form
Having designed a file screen and entered records into the file, you may then discover that a specific field has been omitted (zip code, customer number, etc.). You may redesign your file format without losing any information you have already entered, and without having to recreate the entire file.

To illustrate the procedure, we will use a simple file called 'MAILLIST' which contains the fields NAME, ADDRESS, CITY, STATE and ZIP, and to which we will add the field called PHONE NUMBER. The redesigning process is actually made up of two separate procedures: 1) changing the original form, and 2)

transferring the records you have already added from the original file to the new one.

> **Note:** To redesign a form before any records are added, follow Steps 1 and 2; when the system returns to the Main Menu, add records as usual (Section 7.0). These two steps allow you to make a copy of your original form design. When you are initially setting up the file format this will keep you from having to re-enter the entire form each time you make a mistake.

1. Select Option 2 on the Main Menu (Design a New File).

2. At the 'new file name' prompt, enter the word 'copy,' and press RETURN. The system will then ask for 'Name of File to Duplicate.' Enter the old file name 'MAILLIST,' and press RETURN. The system then prompts for the new file name; for the purpose of this demonstration, the new file will be called 'NEWMAIL,' so enter this name and press RETURN.

The original file screen format for 'MAILLIST' will be displayed. Using the cursor keys as when the screen was first designed, add the phone number field to the new format. Press RUN/STOP, then answer the remaining file format questions, as when the file was first created.

3. After redesigning the format, the system returns to the Main Menu. Select Option 4, Load Mailing Label/Print Dump.

> **Note:** The information that is added to a record in THE FILING ASSISTANT is stored in a certain way, with format data exclusive to THE FILING ASSISTANT; the following output, or 'neutralization' procedure strips the records of this exclusive format data, so all that remains in the file is the information that you entered when adding records (John Jones, Philadelphia, 0001, $59.95, etc.).

4. At the prompt 'File Name to Print,' enter 'MAILLIST,' and press RETURN. Respond '1' to the 'Number of Labels,' 'Number of Lines Per Label,' and 'Starting Position of Label 1' screens.

5. The next screen prompt will ask what is to be printed on Line 1; enter the numbers 1, 2, 3, 4 and 5, following each number with a RETURN. This will tell the program to print all five fields on Line 1.

6. At the 'specify number of sort keys' prompt, enter '1,' and press RETURN. For 'selection criteria,' enter '1' to print all records.

7. At the next screen prompt, select Option 4 to 'Print to Disk in Sequential File Format.' This new 'sequential file' will be called 'SEQMAIL;' enter this name at the prompt, enter the correct disk drive device number, and press RETURN.

8. This will begin the process of 'neutralizing' the records that had been entered under the file name 'MAILLIST', so that they are now removed from that file's format and the neutralized information will be stored in 'SEQMAIL.'

The next steps will insert these 'neutralized' records into the new file 'NEWMAIL.' When the red disk drive light has gone off, the system returns to the Main Menu. Select Option 1, 'Change/ Update an Existing File.' At the file name prompt, enter 'NEWMAIL,' and the correct device number.

9. When the NEWMAIL record screen appears, enter 'menu' at the Command Line and press RETURN. From the Program Menu that appears, select Option 4, 'Read Data from a Sequential File.'

10. Then select Option 1 to 'Add Records to NEWMAIL From a Sequential File.' At the prompt, enter '5' for the number of fields to be added to each record. Then enter the following labels for each field to be added (these labels must correspond exactly to the labels on the record screen):

Field #	**Label**
1	Name
2	Address
3	City
4	State
5	Zip

11. Each label is followed by a RETURN; after the last RETURN, enter the name of the sequential file the 'MAILLIST' records were stored in (SEQMAIL), and press RETURN.

12. The system will now add all of the records that had been in MAILLIST to NEWMAIL. When this process is complete, NEWMAIL will contain all the information from MAILLIST and have a blank field available in which you can enter the phone number.

GLOSSARY

Data Base Management System —
A method of entering, storing and retrieving information. Related information is stored in files so that the information can be easily retrieved, analyzed and reported.

Field —
An area where a data element is entered or displayed. For example, a 'City' field would contain 'Philadelphia,' 'Boston,' etc. An 'Amount' field would contain a dollar value.

Numeric fields can contain only numbers. Alphabetic fields can contain letters or numbers, but will not allow for mathematical operations on the numbers. Alphanumeric fields can contain numbers, letters, or special characters (*,% &).

File —
A named place for storing related records. Each file must have a name so the system can retrieve the information.

Record —
An organized grouping of related data. For example, in a file of Current Clients, each record might contain the following fields:

Client First Name
Last Name
Street Address
City
State
Zip Code
Telephone Number

Each client would be listed on a different record; the records would be stored in the Current Clients File.

Sequential File —
A file in which raw, unformatted data is stored, one item after another in the order it is entered, and read back in the same order.

Sort key —
The field(s) by which information is sorted. For example, in the Current Clients File, the sort key might be Client Last Name. Therefore, when the system processes and store the records in the file, they would be stored in alphabetical order by the Client Last Name. If Zip Code is the sort key, records would be stored in numerical order by Zip Code.

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